

ABC Project Highlights

Project Name: I-15; South Layton Interchange

Project #/PIN #: S-15-8(211)332 / 4184

Year Constructed: 2010

ABC Element(s): Bridge Launch

Placement Method:

Contracting Method: Design-Build

Project Description: The South Layton Interchange Project replaced the existing half interchange and Main Street fly over with a full interchange (SPUI) on I-15, replaced the existing at grade railroad crossing with a bridge, and provided a new alignment (Layton Parkway) to the West of the railroad.

To get Layton Parkway up and over the track, the vertical profile needed to be raised 29 feet. Poor soil conditions under the project site required the designers and contractors to account for liquefaction, mitigate lateral spread, and place surcharge to reduce settlement times.

A 2-span steel girder structure on integral abutments with wraparound MSE walls was used for the SPUI. Contract requirements dictated that the contractor limit construction impacts to the traveling public on I-15. To minimize construction activities over I-15 each span of the superstructure was constructed behind the permanent abutments and launched over I-15. Due to the 20+ feet of surcharge placed behind the abutments the temporary support had to be built high. Once the surcharge was removed each span was lowered down to finished grade using self climbing jacks and launched out over I-15. A closure pour over the center bent was used to tie the two spans together and make the superstructure continuous for live load.

South Layton Parkway over the UPRR and UTA rail lines is a single span steel girder structure on integral abutments with wraparound MSE walls. With the frequency of trains running along the rail lines through the project site the allowable construction window is small. Partial depth precast concrete deck panels were used to limit the amount of forming required over the tracks.





